

**REMARKS**

Claims 1, 4, 7-9 and 12-13 are pending in the application.

Claims 1, 4, 7-9 and 12-13 are rejected.

Claim 14 is added.

**I. 35 U.S.C. § 103****A. Nowak and Pullen References**

The Office Action rejected claims 1, 4, 7-9 and 12-13 under 35 U.S.C. 103 as being unpatentable over Nowak in view of Pullen.

The Office Action states that Nowak discloses a sensor with a flexible connector having first and second ends attached to a piston and to a rotating element of a converting element, wherein the converting element converts linear displacement of the piston to a rotating movement of the rotating element. At 2. The Office Action further states that Nowak does not show a translating member in threaded communication with the rotating element such that the rotating element converts linear movement of the piston to a linear displacement of the translating member. At 2. With respect to Pullen, the Office Action states that Pullen teaches that the rotating element is in threaded communication with a translating member such that rotary movement of the rotating element is converted to a linear movement of the translating member. At 3.

The Office Action finds a motivation to combine these elements of Nowak and Pullen, “[s]ince the actuator of Nowak can be used in environments with continuous vibration, and since the teaching of Pullen concerns position sensors used in environments with continuous vibration; the purpose disclosed by Pullen would have been recognized in the pertinent art of Nowak. It would have been obvious at the time the invention was made to one having ordinary skill in the

art to replace the transducer of Nowak with a transducer which includes a translating member in threaded communication with the rotating element, such that the rotary movement of the rotating element is converted to a linear movement of the translating member, with the translating member displaced along an axis of rotation of the rotating member; and with an LVDT sensing the position of the translating member, as taught by Pullen, for the purpose of providing a transducer which can be used in environments subject to continuous vibration.” At 3.

The Office Action fails to provide sufficient basis to support a motivation to combine these elements of Nowak and Pullen. The modification to combine the two references is based on the general relationship that both Nowak and Pullen may be used in a continuous vibration environment. However, a general relationship between the fields of the prior art reference to be combined is insufficient to suggest the motivation. *Interactive Techs. Inc. v. Pittway Corp.*, Civ. App. No. 98-1464, slip op. at 13 (Fed. Cir. June 1, 1999). “In order to rely on a reference as a basis for rejection of an applicant’s invention, the reference must be either be in the filed of applicant’s endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned.” *In re Oetiker*, 977 F.2d 1443. Nowak is directed to a linear positioning system utilizing a rotary encoder for positioning a load, such as a log for cutting. Col. 1, lines 5-22 and 42-49. Nowak does not mention or concern vibration. Therefore, the motivation to combine Nowak and Pullen, as suggested by the Office Action, lacks support.

Even if one skilled in Nowak were concerned with the issue of vibration, it would not be obvious that Pullen could be combined with Nowak for the solution. Pullen is directed to a rotary displacement transducer. The purpose and operation of the two references are quite different. There is no suggestion to use the rotary displacement transducer in Pullen to enhance or improve the already existing rotary encode in Nowak. And there is no suggestion that one

skilled in the art would consider converting a translational movement of the piston in Nowak to a rotational movement and then back to a translational movement in order to sense movement of the piston in a vibration environment. On the contrary, it is likely that one skilled in the art would regard this as much more likely to increase the complexity and therefore unreliability and inaccuracy of the system, and the Office Action states no reason why one skilled in the art would make the change.

### **B. Long and Pullen References**

The Office Action rejected claims 1, 4, 7-9 and 12-13 under 35 U.S.C. §103 as being unpatentable over U.S. Patent 4,286,386 to Long in view of Pullen. The Office Action rejected these claims by using the same analysis as rejections combining Nowak and Pullen references.

Applicants repeat the same remarks set forth in regard to rejections combining Nowak and Pullen references, as these remarks are applicable in response to the rejection of these claims.

Therefore, claims 1, 4, 7-9 and 12-13 are patentable over Long in view of Pullen.

## **II. New Claims**

Claim 14 depends from independent claim 7 is allowable for the reasons set forth above. In addition, claim 14 recites other distinct features which further differentiate claim 14 from the combination of the reference cited by the Examiner, either taken singly or in combination. Accordingly, claim 14 is allowable.

## **III. Summary**

Having fully addressed the Examiner's objections and rejections, it is believed that in view of the preceding remarks, this entire application stands in a condition for allowance. If, however, the Examiner is of the opinion that such action cannot be taken, he is invited to contact the applicants' attorney at the number and address below in order that any outstanding issues may be

resolved without the necessity of issuing a further Action. An early and favorable response is earnestly solicited.

Enclosed is a Petition for Revival of an Application for Patent Abandoned Unintentionally under 37 CFR 1.137(b) and an authorization to charge the Petition Fee in the amount of \$750.00 to Deposit Account 03-3839. The Commissioner is further authorized to charge any deficiency or to credit any overpayment to Deposit Account No. 03-3839.

Also enclosed are an information disclosure statement and PTO form 1449, as well as copies of cited references.

Please address all future correspondence to Intellectual Property Docket Administrator, Gibbons, Del Deo, Dolan, Griffinger & Vecchione, One Riverfront Plaza, Newark, NJ 07102-5496. Telephone calls should be made to Vincent E. McGeary at (973) 596-4837 or (973) 596-4500.

**IV. Fees**

If any additional fees are due in respect to this amendment, please also charge them to Deposit Account No. 03-3839.

Respectfully submitted,



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